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INTERNATIONAL STANDARD

colour inside

Energy performance of lamp controlgear – Part 2: Controlgear for ~~high intensity~~ discharge lamps (excluding low-pressure mercury fluorescent lamps) – Method of measurement to determine the efficiency of controlgear

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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ENERGY PERFORMANCE OF LAMP CONTROLGEAR –

Part 2: Controlgear for ~~high intensity~~ discharge lamps (excluding low-pressure mercury fluorescent lamps) – Method of measurement to determine the efficiency of controlgear

FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 62442-2:2018. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 62442-2 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lighting. It is an International Standard.

This third edition cancels and replaces the second edition published in 2018. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) the title of Part 2 has been modified;
b) this edition has been harmonized with IEC 62442-1 and IEC 62442-3;
c) the reference to and use of the measurement methods for non-active power consumption in accordance with IEC 63103 have been added.

The text of this International Standard is based on the following documents:

Draft	Report on voting
34C/1546/FDIS	34C/1549/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 62442 series, published under the general title *Energy performance of lamp controlgear*, can be found on the IEC website.

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ENERGY PERFORMANCE OF LAMP CONTROLGEAR –

Part 2: Controlgear for ~~high intensity~~ discharge lamps (excluding low-pressure mercury fluorescent lamps) – Method of measurement to determine the efficiency of controlgear

1 Scope

This part of IEC 62442 defines a measurement method of the power losses of electromagnetic controlgear, the total input power and the standby power of electronic controlgear for ~~high intensity discharged~~ discharge lamps (excluding low-pressure mercury fluorescent lamps). A calculation method of the efficiency of controlgear for ~~high intensity discharged~~ discharge lamp(s) is also defined.

It is assumed that the controlgear are designed for use on DC supplies up to 1 000 V and/or AC supplies up to 1 000 V at 50 Hz or 60 Hz.

This document applies to electrical controlgear-lamp circuits comprised solely of the controlgear and of the lamp(s).

NOTE Requirements for testing individual controlgear during production are not included.

This document specifies the measurement method for the total input power, the standby power and the calculation method of the lamp controlgear efficiency for all controlgear sold for domestic and normal commercial purposes operating with ~~high intensity~~ discharge lamps.

This document does not apply to:

– controlgear which form an integral part of lamps;
– controlgear circuits with capacitors connected in series;
– controllable electromagnetic controlgear.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-845, *International Electrotechnical Vocabulary (IEV) – Part 845: Lighting* (available at http://www.electropedia.org)

IEC 61347-1:2015, *Lamp controlgear – Part 1: General and safety requirements*

~~IEC 61347-2-9, *Lamp controlgear – Part 2-9: Particular requirements for electromagnetic controlgear for discharge lamps (excluding fluorescent lamps)*~~

~~IEC 61347-2-12, *Lamp controlgear – Part 2-12: Particular requirements for d.c. or a.c. supplied electronic ballasts for discharge lamps (excluding fluorescent lamps)*~~

IEC 63103:2020, *Lighting equipment – Non-active mode power measurement*

IEC TS 63105:2021, *Lighting systems and related equipment – Vocabulary*

IEC Guide 115:~~2007~~2021, *Application of uncertainty of measurement to conformity assessment activities in the electrotechnical sector*

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Edition 3.0 2022-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Energy performance of lamp controlgear – Part 2: Controlgear for discharge lamps (excluding low-pressure mercury fluorescent lamps) – Method of measurement to determine the efficiency of controlgear

Performance énergétique des appareillages de lampes – Partie 2: Appareillages des lampes à décharge (à l'exclusion des lampes à fluorescence à vapeur de mercure à basse pression) – Méthode de mesurage pour la détermination du rendement des appareillages

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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PERFORMANCE ÉNERGÉTIQUE DES APPAREILLAGES DE LAMPES –

Partie 2: Appareillages des lampes à décharge (à l'exclusion des lampes à fluorescence à vapeur de mercure à basse pression) – Méthode de mesurage pour la détermination du rendement des appareillages

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L'IEC 62442-2 a été établie par le sous-comité 34C: Appareils auxiliaires pour lampes, du comité d'études 34 de l'IEC: Eclairage. Il s'agit d'une Norme internationale.

Cette troisième édition annule et remplace la deuxième édition parue en 2018. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) le titre de la Partie 2 a été modifié;
b) cette édition a été harmonisée avec l'IEC 62442-1 et l'IEC 62442-3;

c) des références à l'IEC 63103 ont été ajoutées afin d'appliquer les méthodes de mesurage de la consommation de puissance en mode non actif.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
34C/1546/FDIS	34C/1549/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La version française de cette norme n'a pas été soumise au vote.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/standardsdev/publications.

Une liste de toutes les parties de la série IEC 62442, publiées sous le titre général *Performance énergétique des appareillages de lampes*, se trouve sur le site web de l'IEC.

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PERFORMANCE ÉNERGÉTIQUE DES APPAREILLAGES DE LAMPES –

Partie 2: Appareillages des lampes à décharge (à l'exclusion des lampes à fluorescence à vapeur de mercure à basse pression) – Méthode de mesurage pour la détermination du rendement des appareillages

1 Domaine d'application

La présente partie de l'IEC 62442 définit une méthode de mesurage des pertes de puissance de l'appareillage de commande électromagnétique, de la puissance d'entrée totale et de la puissance de veille de l'appareillage électronique des lampes à décharge (à l'exclusion des lampes à fluorescence à vapeur de mercure à basse pression). Une méthode de calcul du rendement des appareillages de lampes à décharge est également définie.

Par hypothèse, les appareillages sont conçus pour des alimentations en courant continu jusqu'à 1 000 V et/ou des alimentations en courant alternatif jusqu'à 1 000 V à 50 Hz ou 60 Hz.

Le présent document s'applique aux circuits appareillage-lampe électriques constitués exclusivement de l'appareillage et de la ou des lampes.

NOTE Les exigences pour les essais des appareillages individuels pendant la production ne sont pas incluses.

Le présent document spécifie la méthode de mesurage de la puissance d'entrée totale et de la puissance de veille, ainsi que la méthode de calcul du rendement de l'ensemble des appareillages de lampes à usage domestique et commercial normal, qui fonctionnent avec des lampes à décharge.

Le présent document ne s'applique pas aux:

– appareillages qui font partie intégrante des lampes;
– circuits d'appareillages à condensateurs reliés en série;
– appareillages de commande électromagnétiques gradables.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60050-845, *Vocabulaire électrotechnique international (IEV) – Partie 845: Eclairage* (disponible à l'adresse http://www.electropedia.org)

IEC 61347-1:2015, *Appareillages de lampes – Partie 1: Exigences générales et exigences de sécurité*

IEC 63103:2020, *Appareils d'éclairage – Mesure de puissance en mode non actif*

IEC TS 63105:2021, *Lighting systems and related equipment – Vocabulary* (disponible en anglais seulement)

Guide IEC 115:2021, *Application of uncertainty of measurement to conformity assessment activities in the electrotechnical sector* (disponible en anglais seulement)